Fact Sheet Amendment for Permit Modification
Avista Corporation
NPDES Permit NO. WA-004519-5

I. General information

Facility: Avista Corporation
1411 East Mission
P.O.Box 3727
Spokane, WA 99220

II. Permit modification background

On April 6, 2004, Avista Company contacted our office requesting for a permit modification (Attachment #1). The company proposes to activate a second discharge outfall for regular use which is allowed for emergency back up only in the current permit. The reason for the change is an estimated potential energy saving. The company is considering using their well #2 water to provide cooling for their headquarters' building on Mission Street. The well #2 water is piped directly to discharge through the outfall #2 to the Spokane River. By doing so, the company can save energy cost of current practice of running the mechanical chillers to cool the building.

III. Permit application

Avista Company submitted a permit application for the modification on June 21, 2004. The application provided basic information regarding current operation of outfall #1 and the proposed outfall #2 discharge flow and effluent temperature.

Upon review of the permit application, we conducted a site inspection at the facility on July 1, 2004. We confirmed that the company does have the certificate of water right to use the well #2. The current discharge through outfall #1 is only using a portion of the effluent flow limit of 2.1 MGD, with a maximum daily of 0.561 MGD and monthly average 0.439 MGD. The proposed discharge flow through outfall #2 is estimated at a daily max of 0.605MGD and a monthly average of 0.561 MGD. This will result in a total discharge from both outfalls with a daily maximum of 1.166 MGD. The outfall #2 is approximately 400 feet north of outfall #1.

IV. Effluent limits modification

Following our site inspection, the facility submitted additional information for their proposed discharge and the upgraded maps and flow schematic (Attachment #2). With the proposed changes in flow and effluent temperature, it is necessary to reevaluate water quality based effluent limit for outfall #2 and modify effluent limit for outfall #1. To evaluate the reasonable potential, A EPA spreadsheet model (Attachment #3) is used. The input parameters are as following:

Outfall #1:	Flow: daily maximum 0.56 mgd;	monthly average 0.439 mgd
	Temperature: annual average 85 ^{0}F	
Outfall #2	Flow: daily maximum 0.605 mgd	monthly average 0.561 mgd
	Temperature: proposed: 72-75 ^{0}F	

Receiving Water: Spokane River 7Q10 critical flow: 707.1 cfs
Water quality criteria for the river temperature: 20 ^{0}C.

The results of running the model conclude that the outfall #1 will cause the river to increase the temperature approximately 0.04^{0}C at its mixing zone boundary, and the outfall #2 will cause the receiving water to increase the temperature approximately 0.02^{0}C at its mixing zone boundary. Both results are acceptable according to the technical guidance of the EPA model. Therefore the effluent limits are determined as following based on water quality based criteria:

Outfall #1: daily maximum flow: 0.56 mgd; maximum daily temperature: 85^{0} F
Outfall #2: daily maximum flow: 0.61 mgd; maximum daily temperature: 75^{0} F

The testing frequency for outfall #2 will be consistent with the outfall #1. All other conditions of the permit will remain the same.

V. Total Maximum Daily Loading (TMDL) Study

The Spokane River is currently listed for temperature on the State's 303(d) list of impaired waterbodies. When the results of the temperature TMDL Study identify corrective measures, the Department reserves the right to reopen the permit and modify it as necessary to comply with the results of the study.

VI. Public Notice

Public notice of the availability of the draft modification permit is required at least 30 days before the permit is issued [Washington Administrative Code (WAC) 173-220-050]. The fact sheet and draft permit are available for review (see Appendix A—Public Involvement for more detail on the Public Notice procedures).

After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file for the permit and parties submitting comments will receive a copy of the Department's response. Comments and the resultant changes to the permit will be summarized in the fact sheet addendum, Appendix D—Response to Comments.

SPECIAL CONDITIONS

S1. EFFLUENT LIMITATIONS

A. Process Wastewater Discharges

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge (The specific allowed wastestream) at the permitted location subject to meeting the following limitations:

EFFLUENT LIMITATIONS		
Parameter	Average Monthly	Maximum Daily[a]
Flow, outfall #1	--	0.56 MGD
Flow, outfall #2	--	0.61 MGD
Temperature, outfall #1	--	85^0 F (30^0 C)
Temperature, outfall #2	--	75^0 F (23.8^0 C)
[a] The maximum daily effluent limitation is defined as the highest allowable daily value.		

B. Mixing Zone Description

The maximum boundary of the mixing zone is defined as follows: The mixing zone shall extend 300 feet downstream from the outfall and shall consist of no more than 25 percent of the stream flow. The dilution factor at the edge of the chronic mixing zone is 55.4.

S2. TESTING SCHEDULE

A. Process Wastewater Discharges

The Permittee shall monitor the wastewater according to the following schedule:

Tests	Sample Point	Sampling Frequency[1]	Sample Type
Flow, outfall #1	Discharge Pond	Daily	Continuous
Flow, outfall #2	Pump house	Daily	Meter
Temperature (^{0}F) #1	Discharge Pond	Daily	Continuous
Temperature (^{0} F) #2	Outfall #2	Daily	Continuous
[1] The daily sampling is required only when there is discharge from this facility.			

Attachment #1

Fu, Ying

To: Fu, Ying
Subject: NPDES Permit WA-004519-5

-----Original Message-----
From: Kish, Pam [mailto:Pam.Kish@avistacorp.com]
Sent: Tuesday, April 06, 2004 9:24 AM
To: Fu, Ying
Subject: NPDES Permit WA-004519-5

Hello Ms. Fu,

I would like to meet or speak with you regarding a minor modification to the above referenced permit for Avista's headquarters on Mission Ave.

Minor NPDES Permit Modification Request:
Our current permit allows discharge through outfall #2 for emergency back up only. Outfall #1 is the normal operation discharge point. The modification we are requesting is to allow normal discharge through outfall #2 as well as outfall #1, without exceeding the permit parameters of 2.1 MGD flow or temperature of 85°.

Reason for Modification:
Avista estimates a potential, significant energy savings of $8,250 and 149,856 kilowatts per month by using water from Well #2 (which is piped to discharge only through outfall # 2) instead of mechanical cooling chillers to cool the building.

Again, use of outfall #2 as well as outfall #1 would not violate the current permit temperature or flow limits.

I look forward to meeting with you in your office or here at Avista if you would like to visit the site for further discussion. I will call you around noon today to set up a meeting time.

Sincerely,

Pamela Kish
Environmental Coordinator
Avista Corporation
Environmental Affairs MSC 21
1411 East Mission, Spokane, WA 99202
509.495.4948 . 509.495.8469
pam.kish@avistacorp.com

Attachment #2

Avista Corp.
1411 East Mission PO Box 3727
Spokane, Washington 99220-3727
Telephone 509-489-0500
Toll Free 800-727-9170

AVISTA Corp.

July 9, 2004

Ying Fu
Water Quality
Department of Ecology
4601 North Monroe
Spokane, WA 99205

RE: Avista Site Inspection on July 1, 2004 and
Application for Modification of Industrial NPDES Permit No. WA-004519-5

Dear Ms. Fu:

I enjoyed meeting you and Scott Mallery last Thursday when you visited Avista's Headquarters. It was nice to walk around our campus together on such a sunny afternoon! As a result of your visit, you requested additional information. The following is enclosed:

- Revised average and maximum flows for Part B b, EPA Application Form
  Outfall 1 - average flow .439 MGD / maximum flow .561 MGD
  Outfall 2 - average flow .561 MGD / maximum flow .605 MGD
- Avista Land Title Survey
  Verifies City storm drain intersection with Avista's outfall #1 and City ownership of six inch exposed pipe on west bank of Spokane River
- Revised Water Flow Through Facility
  Reflects the intersection of City storm drain with Avista's outfall #1
- Certificate of Water Right and supporting documents for Avista's two wells

Please call me at 509.495.4948 if you have any questions. Again, I appreciate your prompt review of this modification request.

Sincerely,

Pam Kish

Pamela Kish
Environmental Coordinator
pam.kish@avistacorp.com

enclosures

Please print or type in the unshaded areas only.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)* WA-004519-5

OMB No. 2040-0086
Approval expires 7-31-88

FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER *(list)*	B. LATITUDE 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER *(name)*
1	47	40	30N	117	23	12W	Spokane River
2	47	40	25.6N	117	23	13.4W	Spokane River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined *(e.g., for certain mining activities)*, provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUT-FALL NO *(list)*	2. OPERATION(S) CONTRIBUTING FLOW a. OPERATION *(list)*	b. AVERAGE FLOW *(include units)*	3. TREATMENT a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
	Non-contact	average - .439 MGD			
1	Cooling Water	< .56 MGD	none	4A	
	revised	max - .605 MGD			
	Non-Contact				
2	Cooling Water	< .56 MGD	none	4A	
		ave. .561 MGD			
		max. .605 MGD	ave. temp.	71°F	

RECEIVED
JUL 12 2004
DEPARTMENT [illegible]

OFFICIAL USE ONLY *(effluent guidelines sub-categories)*

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES *(complete the following table)* ☒ NO *(go to Section III)*

1. OUTFALL NUMBER *(list)*	2. OPERATION(s) CONTRIBUTING FLOW *(list)*	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK *(specify average)*	b. MONTHS PER YEAR *(specify average)*	a. FLOW RATE *(in mgd)*		b. TOTAL VOLUME *(specify with units)*		c. DURATION *(in days)*
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES *(complete Item III-B)* ☐ NO *(to to Section IV)*

B. Are the limitations in the applicable effluent guideline expressed in terms of production *(or other measure of operation)*?

☐ YES *(complete Item III-C)* ☐ NO *(go to Section IV)*

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS *(list outfall numbers)*
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

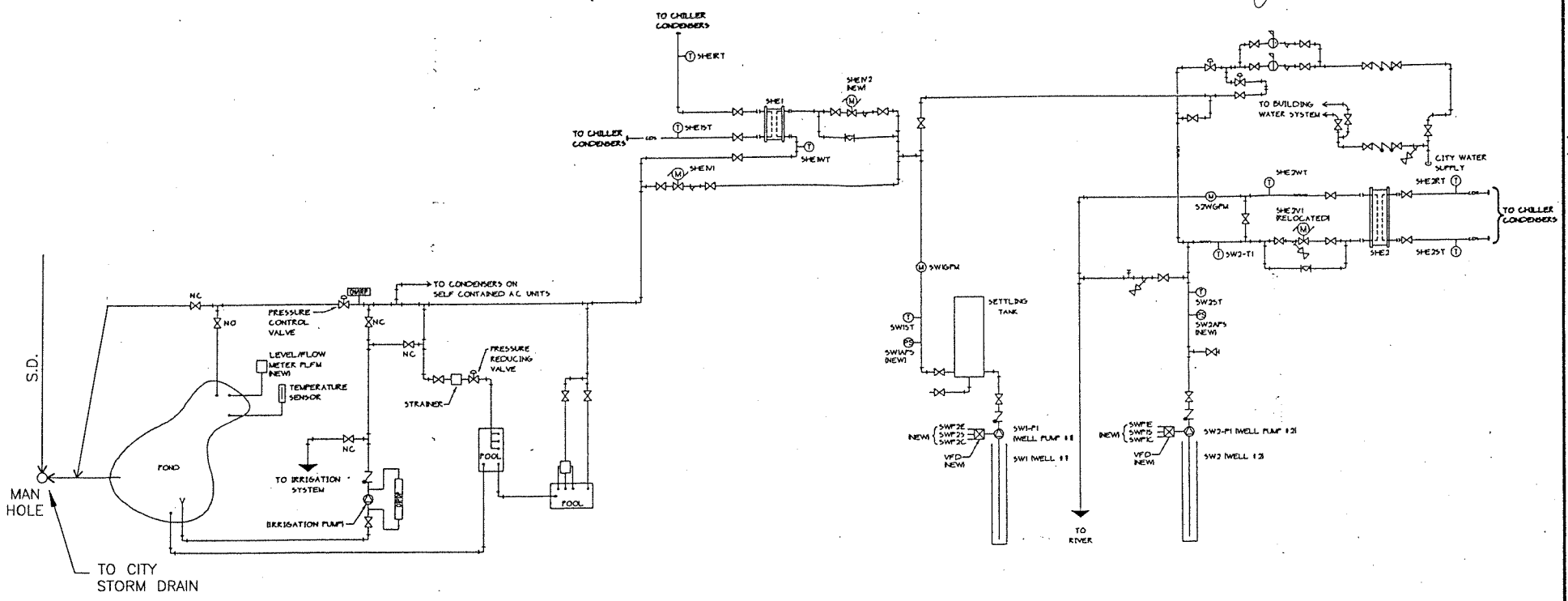
☐ YES *(complete the following table)* ☒ NO *(go to Item IV-B)*

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs *(or other environmental projects which may affect your discharges)* you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

Water Flow Through Facility

Avista Utilities Headquarters
NPDES Permit WA-004519-5
Modification Request 6-18-04
Drawing Revised 7.8.04



WELL WATER SYSTEM SCHEMATIC

1

NOT TO SCALE

MW Consulting Engineers
North 222 Wall Street, Suite 200
Spokane, WA 99201-0877
E-Mail: mwengr@mt.arias.net
Telephone: 509.838.9020 FAX: 509.838.1123

WASHINGTON WATER POWER
CENTRAL PLANT UPGRADE - PHASE 3
SPOKANE, WA

Attachment #3

Effluent and Receiving Water Critical Conditions

Facility: **Avista Corp.**
Receiving Water: **Spokane River**

Design Case: **Effluent limit on outfall #1**

CLICK HERE FOR INSTRUCTIONS	Effluent Data: Annual Average Flow	Effluent Data: Monthly Average Flow	Effluent Data: Daily Maximum Flow	Receiving Water Data: 7Q10 Critical Flow	Receiving Water Data: 30Q5 Critical Flow	Receiving Water Data: Harmonic Mean Flow	%flow for dilution
Flow (MGD)	**0.44**	**0.44**	**0.56**	457.00	639.80	1371.00	**25**
(cfs)	0.68	0.68	0.87	**707.10**			
Critical Temp (°C)	**30.00**			**20.00**			
(°F)	#NAME?			#NAME?			
Critical Hardness (mg/L CaCO3)	**255.00**	Effluent Data ←		**65.00**	Receiving Water Data ←		
Critical pH (s.u.)	**9.50**			**8.50**			
Critical Alkalinity (mg/L as CaCO3)	**223.00**			**50.00**			

Enter own pH & Temp for Ammonia Criteria?	**n**	
	pH	Temp (°C)
@ Acute Boundary		
@ Chronic Boundary		

Enter own Dilution Factors (DFs)?	**n**
Acute DF	
Chronic DF	
Human Health (non C) DF	
Human Health (Carcn) DF	

	@ Acute Boundary	@ Chronic Boundary	Whole River Dilution (@ 7Q10 Flow)	@ 30Q5 River Flow (non C)	@Harmonic Mean River Flow (Carcn)
Dilution Factor	21.37	261.25	1042.00	365.35	781.75
(% effluent)	4.68	0.38	0.10	0.27	0.13
Hardness	73.89	65.73	65.18	-	-
Alkalinity	58.10	50.66	50.17	-	-
Max pH (s.u.)	8.57	8.51	8.50	-	-
Max Temp (°C)	20.47	20.04	20.01	-	-
Max Temp (°F)	#NAME?	#NAME?	#NAME?	-	-

Effluent and Receiving Water Critical Conditions

Facility: **Avista Corp.**
Receiving Water: **Spokane River**

Design Case: **Effluent limit on outfall # 2**

CLICK HERE FOR INSTRUCTIONS	Effluent Data: Annual Average Flow	Effluent Data: Monthly Average Flow	Effluent Data: Daily Maximum Flow	Receiving Water Data: 7Q10 Critical Flow	Receiving Water Data: 30Q5 Critical Flow	Receiving Water Data: Harmonic Mean Flow	%flow for dilution
Flow (MGD)	**0.56**	**0.56**	**0.61**	457.00	639.80	1371.00	**25**
(cfs)	0.87	0.87	0.94	**707.10**			
Critical Temp (°C)	**23.89**			**20.00**			
(°F)	#NAME?			#NAME?			
Critical Hardness (mg/L CaCO3)	**255.00**	Effluent Data ←		**65.00**	Receiving Water Data ←		
Critical pH (s.u.)	**9.50**			**8.50**			
Critical Alkalinity (mg/L as CaCO3)	**223.00**			**50.00**			

Enter own pH & Temp for Ammonia Criteria?	**n**	
	pH	Temp (°C)
@ Acute Boundary		
@ Chronic Boundary		

Enter own Dilution Factors (DFs)?	**n**	
Acute DF		
Chronic DF		
Human Health (non C) DF		
Human Health (Carcn) DF		

	@ Acute Boundary	@ Chronic Boundary	Whole River Dilution (@ 7Q10 Flow)	@ 30Q5 River Flow (non C)	@Harmonic Mean River Flow (Carcn)
Dilution Factor	19.88	204.65	815.61	286.12	611.96
(% effluent)	5.03	0.49	0.12	0.35	0.16
Hardness	74.56	65.93	65.23	-	-
Alkalinity	58.70	50.85	50.21	-	-
Max pH (s.u.)	8.58	8.51	8.50	-	-
Max Temp (°C)	20.20	20.02	20.00	-	-
Max Temp (°F)	#NAME?	#NAME?	#NAME?	-	-